

REMARKS:

In the outstanding Office Action, the Examiner objected to claims 8-10 and rejected claims 1-4, 6 and 11-13. Claims 5 and 7 remain cancelled. No new matter is presented.

Thus, claims 1-4, 6 and 8-13 are pending and under consideration. The rejections are traversed below.

REQUEST FOR EXAMINER INTERVIEW:

Applicants respectfully request that the Examiner contact the undersigned to arrange an Examiner Interview at a time and date of convenience. Applicants also respectfully request that the Examiner contact the undersigned to arrange the Examiner Interview before the Examiner acts on this Amendment.

ALLOWABLE SUBJECT MATTER:

On page 10 of the outstanding Office Action, the Examiner indicated that claims 8-10 would be allowable if rewritten in independent form including all the limitations of any intervening claims.

REJECTION UNDER 35 U.S.C. § 103(a):

Claims 1, 2, 12 and 13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of the following: Inference of letter-phoneme correspondences by delimiting and dynamic time warping techniques (Luk 1) and Inference of letter-phoneme correspondences with pre-defined consonant and vowel patterns (Luk 2).

Claims 4, 6 and 11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Luk 1, Luk 2 and A novel approach to inferring letter-phoneme correspondences (Luk 3).

Luk 1 is directed to delimiting part of a word spelling and pronunciation that is not aligned with existing set of correspondences (see, page 61, section 2.1). The quality of the inferred correspondences in Luk 1 is evaluated based on their ability to translate a word's spelling into its phonemic form based on comparison with a translation obtained using manually-derived correspondences (see, page 62, section 3).

The Examiner acknowledges that Luk 1 does not disclose correcting the assignment of graphemes to phonemes with the aid of position dependent frequencies including a frequency

with which at least one grapheme at a specific position in a grapheme group is assigned to at least one phoneme, but relies on Luk 2 as teaching the same. However, Luk 2 is directed to inferencing phoneme correspondences with pre-defined consonant and vowel patterns. For example, as shown in FIG. 1 of Luk 2, a phoneme string is segmented based on predefined consonant and vowel patterns (see also, page 203, section 1). This, for example, presents a disadvantageous effect because the grapheme to phoneme conversion on the border of the consonant or vowel patterns would not be corrected.

Luk 3 is directed to obtaining letter-phoneme correspondences based on an association of letters to phonemes where the correspondences are either specified by linguists or inferred from the spelling and pronunciation specified in a machine-readable dictionary (see, FIGS. 1A and 1B and corresponding texts).

In contrast to the above-discussed references, the present invention corrects assignment of graphemes to phonemes using the position-dependent frequency with which at least one grapheme at a specific position within a grapheme group is assigned to at least one phoneme.

Each of the independent claims 1, 2, 12 and 13 recite correcting the assignment of graphemes to phonemes with aid of “position-dependent relative frequencies including a frequency with which at least one grapheme at a specific position within a grapheme group is assigned to at least one phoneme.”

The cited references, alone or in combination, do not teach or suggest the claimed invention where assignment of graphemes to phonemes is corrected using the “position-dependent frequencies with which at least one grapheme at a specific position within a grapheme group is assigned to at least one phoneme” (see, independent claims 1, 2, 12 and 13).

It is submitted that the independent claims are patentable over the cited references.

For at least the above-mentioned reasons, claims depending from the independent claims are patentably distinguishable over the cited references. The dependent claims are also independently patentable. For example, claim 11 recites that “...[if] the matrix entry for the preceding phoneme and the preceding grapheme in the word and one of the other two entries are of equal magnitude, the matrix entry for the preceding phoneme and the preceding grapheme in the word is regarded as a maximum.” The cited references, alone or in combination, do not teach or suggest these features of claim 11.

The Examiner also asserts that it is admitted prior art that there is no need to implement dynamic time wrapping when two patterns are already aligned such as when the number of graphemes and phonemes is the same.

Claim 3 recites that "the relative frequencies are determined by selecting words from the lexicon in the case of which the number of the graphemes and the number of the phonemes coincide, for the selected words, the graphemes and phonemes are assigned to one another in the sequence of the specification of their graphemes and phonemes in the lexicon."

The cited references and what the Examiner asserts as admitted prior art, alone or in combination, do not teach or suggest correcting assignment of graphemes to phonemes with "position-dependent relative frequencies" (claim 2 from which claim 3 depends), where "the relative frequencies are determined by selecting words from the lexicon" and "the graphemes and phonemes are assigned to one another in the sequence of the specification of their graphemes and phonemes in the lexicon" (claim 3).

Therefore, withdrawal of the rejection is respectfully requested.

CONCLUSION:

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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